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ABSTRACT

More adult learners than ever are enrolling in postsecondary education. A review of literature found that more than half of all college undergraduates are women, one of six is a member of a minority group, two of five are over the age of 25, and fewer than three in five are full-time students. A study at Empire State College showed that their adult learners are drawn from professional, semiprofessional, and supervisory jobs; the majority are between 25 and 45 years old; about two-thirds are married; 60 percent are women; and they come from widely diverse backgrounds. More than three-quarters have 1-3 years of prior college learning, and more than one-third prefer business as an area of study. Empire State College has started with adult students and attempted to meet their needs by identifying them, defining their goals, and designing nontraditional programs to meet their needs. These programs include a cooperative program with Bristol Laboratories in Syracuse, a program with a senior citizens center, a studio semester program in New York City, a center for distance learning, a public affairs program in the capital, labor union apprentice programs, and others. Empire State College has attracted and seeks to serve one of the most diverse student populations of any college, and after 15 years of operation, more than 12,000 adult students have graduated. This program can serve as a model for the future. (25 references) (KC)

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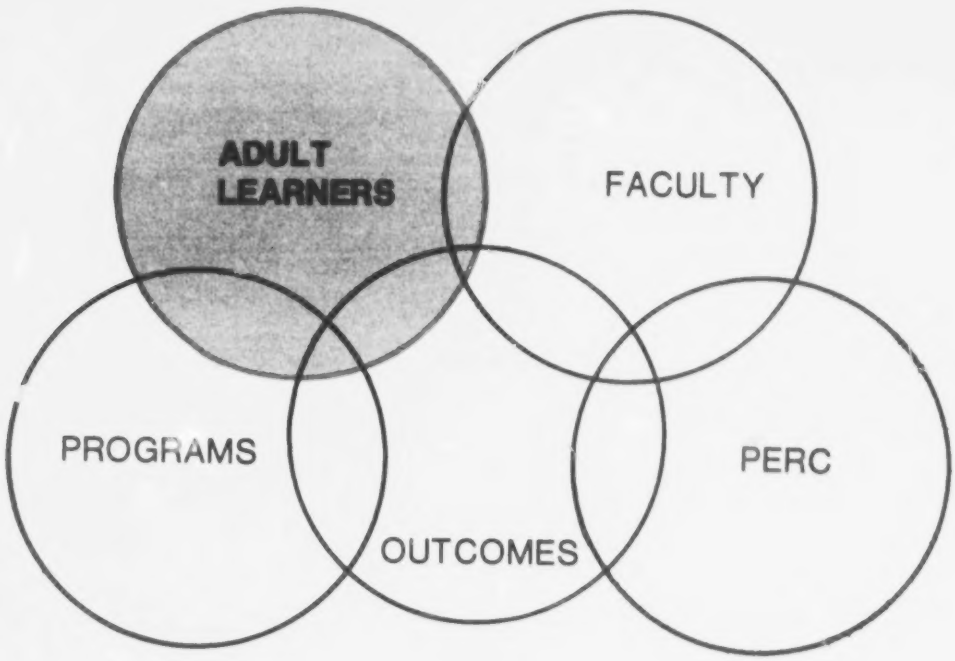

THE ADULT LEARNER IN NON-TRADITIONAL PROGRAMS

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THE ADULT LEARNER IN NONTRADITIONAL PROGRAMS

ENTERING CHARACTERISTICS OF EMPIRE STATE COLLEGE STUDENTS

Prepared by

Office of Research & Evaluation

Empire State College

Saratoga Springs, New York

1986

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THE ADULT LEARNER IN NON-TRADITIONAL PROGRAMS

Adult students are entering college for the first time or re-entering after a long absence from the classroom in ever increasing numbers. The National Center for Education Statistics (NCES) tells us that there was a 70 percent increase in the 25-34 year old group of enrolled students and a 77 percent increase in those students aged 35 and over from 1973 to 1983 (Chronicle, 11/21/84). NCES estimates that more than 40 percent of all students enrolled today are over age 25 and that, by the early 1990's, more than half of the nation's college students will be over 25 (Chronicle, 7/3/85). Not only are students older but more students are attending on a part-time basis. In 1980, 40 percent of the 12 million students attended part-time; by 1990, predictions are that more than half of all students will be learning part-time (Keller, 1983, p. 14).

In the past few years, there have been numerous national and state reports calling for the reform of lower and higher education and stressing serious gaps between society's expectations of performance and the current realities of achievement. The Study Group on the Conditions of Excellence in American Higher Education issued the following statement indicative of the gaps:

> The strains of rapid expansion, followed by recent years of constricting resources and leveling enrollments, have taken their toll. The realities of student learning, curricular coherence, the quality of facilities, faculty morale, and academic standards no longer measure up to our expectations. These gaps between the ideal and the actual are serious warning signals. They point to both current and potential problems that must be recognized and addressed. (Study Group on the Conditions of Excellence, 1984, p.8).

Other publications, such as A Nation at Risk (1983), and Integrity in the College Curriculum (1985), have called our attention to the need for a better educated labor force. American workers are the single most valuable economic

resource that our country possesses. The Business-Higher Education Forum published a report entitled America's Competitive Challenge...The Need for a National Response (1985). This report addresses the role of the adult learner in the revitalization of the American economy in the following statement:

> ...In this decade and the next, most workers will need additional education and training if they are to keep pace with the changing demands of the economy. This means that the scope of existing policies on education, training and retraining, which concentrate primarily on youth and the disadvantaged, must be expanded to include the entire work force! (p.23)

The college degree has become a basic credential for an ever-growing number of occupations. But a growing number of skill areas find key workers in short supply and it is also apparent that a growing number of American workers have antiquated functional skills and deficient academic skills. Many currently employed workers are going to need additional education and training in order to keep pace with the changing demands of their jobs. In order to meet this challenge, the colleges and universities, along with government, business and labor must acknowledge the barriers that exist for the average adult that wants further education or needs retraining in order to be more fully employable. Taking steps to remove these barriers is one key to future success in serving adult learners. The following two quotes express a growing concern about educational institutions' ability to provide the needed leadership and underscore the importance of understanding adults' particular learning needs. "The nation's education and training institutions are responding too slowly to the central role they must play in revitalizing the American economy" (America's Competitive Challenge, 1985, p. 27).

> ...The argument used to be that something had to be done for the good of the adult learner...now people are saying that adult learning has to be improved for the good of the country... [M. Goldstein, ACE Commission on Higher Education and Adult Learning]. (Chronicle, 7/13/85, p. 16)

PERCEVIED BARRIERS TO ADULT LEARNING

Cross has identified 24 barriers to learning which she classifies under three headings: situational, institutional and dispositional (Cross, 1981, p.99). Situational barriers are those arising from one's situation in life at a given time. The cost of education, lack of time, and home and job responsibilities lead all other barriers by substantial margins. Adults in their thirties and forties mention lack of time most often. Second in importance to the situational barriers are the institutional ones, such as: scheduling problems; problems with location or transportation; lack of courses that are interesting, practical and relevant; procedural problems and time requirements; and lack of information about programs and procedures. The third category, the dispositional barriers, are those related to attitudes and self-perceptions about oneself as a learner. The barriers that seem the most relevant for adult learners are: making the psychological transition from community and work roles to the role of student; afraid of being too old to begin; and lack of confidence in ability to learn.

DIVERSITY OF THE ADULT LEARNER POPULATION

Educational programs that attract the adult learner must pay special attention to serving students across a broad spectrum. Adults are exceedingly diverse in their educational purposes, their background characteristics, their work and life experiences they bring to the educational setting, their attitudes, values, and motivations for learning, their learning styles and their abilities and capabilities for contributing to the workforce and society.

The Involvement in Learning report (1984, p.5) stressed the demographic diversity of the 12 million students enrolled in higher education by these facts:

-- More than half of all undergraduates are women

-- One out of every six is a member of a minority group

-- Two out of every five are over the age of 25

-- Fewer than three in five are attending college full-time

One result of this diversity is that no single composite profile can fully capture the educational characteristics and needs of the adult learner. Rather, colleges and universities can serve different groups of adult learners with focused programs that are reasonably effective in meeting their needs. Cross has identified five different groups pursuing academic credit which are summarized here:

1. Full-time Adult Students in Traditional Colleges

   The older students in this group were more likely to come from socioeconomically disadvantaged backgrounds; were more concerned about financing their education; made lower high school grades and lower college grades in major fields; perceived major benefits of education as monetary; and held lower educational aspirations than younger students (Cross, 1981, p. 68).

2. Full-time and Part-time Adult Students in Community Colleges

   This group has an academically self-confident profile--they were older and knew what they wanted out of college; challenged, not bored with classes, felt confident that they could keep up with classes; spent more time studying; were more satisfied with classes and instructors; and preferred instructor-centered classes.

3. Adults in Continuing Education and Extension Divisions

   The adults were young, affluent, upwardly mobile from parents' level of education and jobs, and already employed in professional or managerial jobs. Two thirds of this group were men, primarily motivated by job advancement. This profile is one of stable, responsible citizens, spending some leisure time to improve socioeconomic position through further education (Cross, 1981, pp. 71-72).

4. Adults in Non-traditional, External Degree Program

Sosdian and Sharp studied 1,486 graduates from 32 external degree programs and reported this profile: the median age of the group was 36; consisted mostly of men (71 percent) and from those employed in mostly professional, subprofessional, and technical jobs (54 percent). Eighty-two percent previously attended college and 27 percent had college degrees. The adults in these programs cited flexibility (work and study), earning credit for prior learning, and minimal residence requirements as major reasons for enrolling. They also attained a high degree of personal satisfaction from the programs (Sosdian and Sharp, 1978).

Empire State College

Adult learners at Empire State College are drawn from professional, semi-professional, and supervisory jobs; the majority are between 25 and 45 years of age with an average age of 36. About two-thirds of the students are married; sixty percent are women; and the student body represents widely varied ethnic and religious backgrounds. Over three-quarters have two to three years of prior learning and over a third prefer business as an area of study. The adult learners rate themselves high on independence, persistence, self-motivation and drive to achieve (see Tables in Appendix B).

5. Adults in Distance Learning Programs

The University of Mid-America (UMA) and the British Open University (BOU) are illustrations of this group of adult learners. Both programs stress the delivery of education through television, correspondence, radio and other forms of distance learning. The demographic profiles differ to some extent, partly because of the nature of the curriculum and partly because of the different role played by BOU and UMA in the higher education opportunities in Great Britain and the United States. These programs also differ in that the BOU attracts a majority of men (58%) and UMA attracts an even greater majority of women (75%). However, both programs show a typical middle-class bias, with over half of the students having had previous college experience. Both programs appeal to upwardly mobile young adults who hold good jobs in professional and technical occupations but who are far more likely than full-time college students to be from working-class backgrounds (Cross, 1981, p. 75).

STARTING WITH STUDENTS

Research literature on college attrition indicates that helping students make a successful transition from worker to student is a challenge that must be met. Understanding the barriers previously mentioned can be a powerful tool in getting students off to a good start. Many adults are able to successfully eliminate some of the external barriers (i.e. baby sitter, transportation), and enroll in a program, but if the support is not there to raise self-confidence levels by concentrating on individual needs, their continuous participation may well be problematic. Faculty must be aware of and sensitive to the special learning needs of the adult student, and help them to get acclimated to the environment of higher education. Adults come with vocational and practical learning needs, plus fears. There is a pervasive sense of entering an unknown and unfamiliar arena; thus some adults come to college with a high amount of anxiety and underlying fear of failure surrounding their decision to enroll. Malcolm Knowles, a nationally recognized leader in adult education, has called for major reform in colleges if they are to overcome the barriers adults encounter when they come to the campus. He recently wrote, "it is perhaps a sad commentary that of all our social institutions, colleges, and universities have been among the slowest to respond to adult learners" (Knowles, 1984, p. 100).

On the positive side, colleges can make that transition a productive one by establishing the kinds of programs that will assist adults in adapting to a changed environment and its demands (Starting With Students, Adelman, 1984). By developing voluntary seminars designed to help students clarify educational and personal goals, by developing both oral and written communications skills,

and in general, by giving adults college survival skills, colleges and universities can attract and retain some of the best and most serious students in higher education.

If, in fact, the future does demand that the nation's educational institutions play a central role in the training and re-training of adults of all ages, colleges and universities must respond to the perceived barriers adult learners face and must respond to the diversity presented by these same adults.

THE ROLE OF EMPIRE STATE COLLEGE IN SERVING DIVERSE ADULT LEARNERS

Empire State College has been an institution serving adult learners for the past 15 years and has gained a great deal of practical experience as well as theoretical insight into ways to ease the transition process for adult learners. ESC has served and will continue to serve as a model for other higher education institutions.

This section of the report is organized around six central questions that need to be understood if an educational program is to serve adult learners effectively.

-- Who are the Adult Learners?

-- What are the Goals of Adult Learners?

-- What are the Educational Aspirations and Prior Education of Entering Students?

-- What are the Reasons for Selecting a Nontraditional Program?

-- Can Adults Afford a Nontraditional Program?

-- How do Adult Learners View Themselves?

Since 1974, the Office of Research and Evaluation has collected and analyzed substantial background information about adult learners enrolling at Empire State College. The office has developed a Student Biographical Inventory (SBI) which has been administered to over 5000 entering students in the past twelve years. (See Appendix A for a complete description of the inventory and a discussion of the samples drawn and the methods used in the tables in this report.) Information from the SBI allow us to provide answers to the central questions posed.

Who are the Adult Learners?

> A recent study estimates that as many as forty million Americans are in a state of transition regarding their jobs and careers; sixty percent of them say they plan to seek additional education. (Arbeiter et., at., 1978)

Twenty-four million Americans are thus seeking education as they plan job and career changes. Empire State College has been serving many of these adults since its doors opened in fall 1971. Empire State College today serves a very diverse group of adult learners across the state of New York in over 40 locations ranging from small upstate communities to major suburban areas to the highly complex metropolitan area surrounding New York City.

The general profile of the entering Empire State College adult learner compiled over the years looks like this: The average age is 36; two-thirds are between age 30 and 50 and students range in age from 18 to 80. Over half (54%) of the students are women and two-thirds of the students are married. Twelve percent of the students identify with a minority race. Adult learners are upwardly mobile people employed in semi-professional, supervisory, technical and clerical jobs, making an average yearly salary of $17,500. Adult learners see as their top goals to increase their knowledge of an academic field, to attain specific skills useful on a job, simply to learn, and to improve their professional status. Business, management and economics

is the most popular area of study. A majority enroll with some prior college, very often with an associate's degree. Almost sixty percent say they intend to pursue a master's or professional/doctoral degree in the future. Over 80 percent applied only to ESC and see the college as a place particularly suited to meet their learning and personal needs. The College has attracted these adult learners because of the flexibility and independence allowed in the program. The ability to work and study at the same time and to earn credit for prior college-level learning are also very appealing features to entering students. Students rely upon earnings from work, grants, and employer support to finance their education but almost one-third state that financial aid is essential to their completing a degree. Entering students view themselves as strong on independence, persistence, drive to achieve, leadership ability, and academic ability--a set of traits marking off determined persons committed to earning a degree at this point in their lives.

After examining data on seventeen background characteristics over the years from 1974 to 1984, research staff concluded that the general profile of entering ESC students is remarkably similar over the ten year period. The seventeen characteristics examined include: age, sex, marital status, race, academic and personal goals, primary area of study, reasons for enrolling, highest level of formal education achieved by the student, highest degree sought, sources of financial support, ability to finance a college education, student's annual income, students' perceptions of selected academic traits, students' current occupations, number of hours worked per week, reported source of information about the college, and applications to other colleges (see Tables 1-16, Appendix B for a full display of the data). The Empire State student has changed little in these characteristics over the past decade. The college has been successful in attracting rather large number of adult learners to its program.

There are, however, some characteristics where moderate changes have occurred. First, area of study. Although the Business, Management, and Economics area has always been the most frequently chosen area of study, the proportion choosing this area in the past five years has risen by 12 percent over the 1974-78 period (Table 7). Entering students have also shown an increased interest (12 percent) in developing an understanding of science and technology as a goal of their education (Table 6) but this is reflected in only a four percent rise in the science, math, and technology area of study (Table 7). Today's students are more interested in the personal goal, "chances to make more money" (up 14% from 1974, Table 6) and in ESC's modest tuition as a reason for enrolling (up 22% from 1974, Table 11). More students have relied on grants to finance their education in the 80's than they did in the 70's (up 17%, Table 13). The number of students reporting incomes over $30,000 are up moderately with a 12% increase since 1974-78; in part, this increase is accounted for by inflation over the decade (Table 15). The last two trends worth noting here are these: among the occupations of entering students, the clerical ranks have increased moderately since the 70's (up 14% Table 4) and the proportion of students who are married has declined (down 14%, Table 2).

What are the Goals of Adult Learners?

Most individuals have more than one reason for learning and most adults give practical, vocationally focused goals for their entering college. As Cross has aptly summarized the research literature:

> Learning that will improve one's position in life is a major motivation. Just what will "improve life" varies with age, sex, occupation, and life stage in rather predictable ways. Younger adults are primarily interested in education for upward career mobility; adults with a good job want a better one, and those without a good job want new career options. Older people and those reaching career levels where additional education promises few extrinsic rewards are often interested in learning that will enhance the quality of life and leisure (1981, pp. 96-97).

Students entering ESC were asked to respond to 19 goal statements on the SBI which were organized into four broad categories: academic goals; career preparation/improvement goals; personal development goals; and social/cultural goals. The two most important academic goals cited were "simply to learn" (70% said this was very important) and "to meet the requirements to enter a profession or graduate school" (57% agreed, Table 6). A surprisingly consistent goal stated by entering adults since 1974 is the "itch to learn," the intrinsic satisfaction that comes from pursuing an education.

In the career goal area, two-thirds of entering students said "improving their professional status" was very important. Almost six out of ten (59%) said attaining specific skills useful on a job was a very important goal and 57% stated improving their chances to earn more money was very important. Slightly less than one-third reported that "discovering their vocational interests" was very important (Table 6).

Regarding personal development goals, just over half (55%) said "increasing their self-confidence" was very important along with improving their leadership skills (49%). The dominant cultural goal indicated by these students was to increase their "awareness of different philosophies, cultures and ways of life"(41%).

Over the 1974-84 decade, entering students have remained remarkably consistent in their responses to these goal statements. There were two goals, however, where students did change their responses from the 1970's: a rise from 43% to 57% on the importance of making more money and an increase from 17% to 29% in the goal of understanding science and technology (Table 6).

Adults usually do pursue an education for more than one goal. The goals profile seems to be constant over a fairly long period of time in the

aggregate; more detailed studies, however, do confirm Cross' basic finding that goals do vary for different groups of adults depending on their age, gender, career level, and leisure interests.

What are the Educational Aspirations and Prior Education of Entering Students?

Almost six out of every ten entering students expect to earn a Master's degree (40%) or a professional/doctoral degree (17%) (Table 9). This high aspiration level for advanced education is somewhat surprising, especially when considering the average age of the enrolling students and the somewhat shortened career paths that may be ahead for many ESC graduates. Yet this fact has remained essentially the same over a 10 year period of time.

Almost three-quarters of the adult learners come to ESC with some college (40%), often times with an associate degree (31%) (Table 8). Many of these entering students also plan on obtaining credit for prior work and life learnings. A small proportion of ESC's entering students already have a four-year degree or even some graduate work (11%) and are seeking a second baccalaureate to enter a new career field. One of the frequent patterns here is former high school teachers seeking new career interests in business or science occupations.

The top four preferred areas of study are business (31%); community and human services (17%); science, math, and technology (12%); and the arts (12%) (Table 7). The proportion of entering business students has risen substantially in the past five years (up from 19%) and the science area students have slightly increased from 8%. Over the 1974-84 period over 82% of the entering students applied only to Empire State College and another 13% applied to one other college (Table 10). Such a high proportion clearly indicates that the attractive features of the college draw a pool of students that are not being competed for by other colleges and universities. Along

with other profile information summarized elsewhere in this report, it is clear that Empire State is attracting a large group of students rather uniquely suited to benefit from the academic program.

What are the Reasons for Selecting a Nontraditional Program?

Empire State students come to college for many reasons. Job and family responsibilities frequently conflict with the usual fixed schedule of regular classes on a traditional campus. Often, the only way adult learners can obtain an education is through an alternative approach. The top three reasons entering adults find most attractive are: the independence and flexibility of the time, place, pace, and format of learning that ESC offers; the fact that they can work and study at the same time; and that they can obtain credit for prior learning (Table 11). The special programs ESC offers and the opportunity to study one-to-one with faculty members are also very appealing reasons for enrolling. All of these reasons are consistent over the years with independence and flexibility always at the top of the list. The one feature that has risen in importance, ESC's modest tuition (up from 31% to 53%), probably reflects the fact that ESC is a public institution undergoing relatively small increases in tuition compared to the rapidly rising costs of education elsewhere.

Entering students hear about the college from other ESC students or graduates, from friends or family members, from ads in various media, and from staff at other colleges (Table 12). These primary sources reveal the importance and significance of a large rather informal network of contacts that direct applicants to the college. Furthermore, these sources have not changed dramatically since 1974. Again, these facts point to a distinctive recruiting arrangement for a nontraditional program like ESC's; if adult

learners are satisfied with the education that they receive, they are most likely to tell others, similar to themselves, about the Empire State opportunity.

Can Adults Afford a Non-traditional Program?

As might be expected, the major source of financing for adult learners are their earnings from work. Almost 60% of the entering students report this source as primary (Table 13). In addition to earnings, adults say that employer support, grants, loans, spouses' earnings and savings are used to support their education. These sources have remained about the same over the years since 1974 with the exception of grants which has increased rather substantially.

Regarding their ability to finance a college education, about one-third of the entering students report they have sufficient funds to cover their costs and another third say they can complete their college program only with financial aid (Table 14). Again, these proportions have remained stable over the years. Looking at the students' income data provides another way to gauge students' financial needs--data which confirms adults' estimates provided in Table 14. About one-third of the entering students in the period 1979-84 had incomes of $10,000 or less while over a third (38%) had incomes of $20,000 or more (Table 15). Empire State College is attracting students with a wide income range, literally from no income at all to a very few earning over $60,000 per year.

How do Adult Learners View Themselves?

The Student Biographical Inventory contains several questions that ask newly enrolled students to rate themselves on selected academic abilities and oher traits thought to be related to success in college. These student self-assessments are helpful to a college in that they provide a collective

portrait of how entering adults see their world. Independence is and has been the dominant trait reported by entering ESC students. Eighty-three percent of the adults rated themselves above average or higher on this trait compared to others of their own age (Table 16). In many ways, this is not surprising, since these adults have been successful in their jobs, assumed family responsibilities, and frequently are involved in their communities.

Entering students see themselves as persistent, with a strong drive to achieve, having leadership ability, and an ability to handle stress (Table 16). Academically, students see themselves as strong in general academic skills, followed by lower ratings in reading ability, writing ability, public speaking ability, and mathematical ability.

SPECIAL PROGRAMS FOR DISTINCT PROFILES OF ADULT LEARNERS

Over the years Empire State College has developed a large number of special programs to serve the distinct educational needs of particular constituencies. These special programs have served the needs of minorities, labor unions, community colleges, rural populations, business and industry, state and local agencies, other SUNY campuses, and various community organizations. These programs include a cooperative program with Bristol Laboratories in Syracuse, a program with the Lockport Senior Citizens Center, the Studio semester program in New York City, the Center for Distance Learning, the Public Affairs Program in Albany, the IBEW Apprentice Training Program at the Center for Labor Studies in New York City, the Fulton-Montgomery Community College unit, the Circulation Management Program in Rochester, the Bedford-Stuyvesant unit in Brooklyn, the IBM Cooperative Program in Brooklyn, a cooperative program with the Fashion Institute of

Technology in Manhattan and the Solidaridad Humana-Lower East Side Unit in Manhattan among others. We have selected four programs from this list to illustrate how special programs can be created to serve the distinct educational needs of adult learners. These four programs and the kind of adult learners served are summarized in the following sections.

The Bedford-Stuyvesant Unit

Initiated through the efforts of the Bedford-Stuyvesant Restoration Corporation and with financial support from the Carnegie Foundation, Empire State College established an educational program designed to meet the needs of community residents in 1974. The Bedford-Stuyvesant Restoration Corporation is a federally funded non-profit corporation established in 1967 to revitalize the community--economically, physically, and socially. The Empire State unit operates out of the Commercial Cultural Center of the Restoration Corporation. The Bedford-Stuyvesant unit is staffed by a coordinator and a group of part-time faculty to serve the educational needs of a population of approximately 400,000 of which 88 percent are black. The academic program at Bedford-Stuyvesant is based upon the same principles as the other units and centers of the college, offering an alternative in the time, place, and mode of learning that is responsive to the constituency of this area. Access to a college program is provided for those previously unable or unwilling to attend a regular campus program. This program has been in operation for twelve years and has graduated over 130 students.

According to a 1977 evaluation study, the typical Bedford-Stuyvesant student was black (90%), female, average age 37, working full time in jobs classified as semi-professional and clerical in nature with an annual income

of $11,525 (ORE, Unit Evaluation, 1977). These students were pursuing degrees primarily in community and human services, business, and the social sciences. Almost all (88%) had some previous college experience. These adults stated that their major objectives at ESC were to obtain specific skills useful on the job, meet academic requirements for graduate or professional school; increase their ability to undertake self-directed learning, and earn a degree because it is required for a present or future job. All these goals were cited as very important, in larger percentages than the ESC overall averages. In terms of their self-assessments, these students rated themselves above average on such characteristics as leadership and drive to achieve but below average on academic skills when compared to other ESC students (ORE, Unit Evaluation, 1977, pp. 18-24).

International Brotherhood of Electrical Workers (IBEW) Apprenticeship Training Program

Since fall 1977, the Center for Labor Studies has been providing an educational program for IBEW Local 3 apprentices under the auspices of the Joint Apprentice Committee of the Electrical Industry. The apprentice program has two primary objectives: (1) to provide apprentices with an education that will enhance their personal and academic growth, and that will enable them to become well-informed citizens and trade unionists; and (2) to provide academic credit for college-level learning undertaken in the course of apprenticeship and thus provide the academic credentials necessary for occupational mobility (ORE, CLS Report, August 1982, p. 18). The 64 credit associate in science program, required of all apprentices, is comprised of two parts. Students earn 32 credits for successful completion of courses in electrical technology and on-the-job learning. Over a five year period, students receive 720 hours of classroom instruction and a minimum of 8600 hours of on-the-job training

and field experience. Students complete their associate's degree by earning 32 credits in liberal arts courses offered by the Center for Labor Studies. Students are required to take introduction to labor studies, principles of writing, work and contemporary social issues, principles of unionism, math/statistics, and basic economics. Since the AS degree is required of all apprentices, growth in the IBEW program is dictated by the number of new apprentices allowed each year. In recent years the average number of apprentices totals 1400.

The profile of the IBEW apprentice student is considerably different from the general ESC profile and looks like this: 98% are men, the average age is 25, 90% are blue collar workers, 24% are from minority backgrounds. Diversity of a different kind describes these students when contrasted to the dominant ESC profile: IBEW apprentices are younger, more likely to be men, more likely to be married, more likely to be black and Hispanic, more likely to have less prior college-level learning, and are more likely to see a college education as an important path to occupational and personal advancement (ORE, CLS report, May 1982).

Studio Semester Program

The Studio Semester Program was established in cooperation with the Council of Art Department Chairpersons (SUNY) and the University-wide Committee on the Arts to enable students interested in becoming professional artists to experience the New York City art world through apprenticeships, lectures, critiques, and seminars with professional artists, critics, and art dealers. The program draws a limited number of advanced and professionally oriented art students from other SUNY campuses. After completing their semester study, SUNY students return to their home campuses. These students are young (average age 20), male (56%), enrolled as full-time students who

come from twelve different SUNY campuses (ORE, Studio Arts Evaluation, 1976). The Studio Arts Program is a unique professionally oriented program where young artists are given the opportunity to test themselves and their talents in a specialized, competitive environment observed and taught by outstanding artist-critics.

Circulation Management Program

Starting with conversations with local Rochester newspapers about the need for a college level circulation marketing and management program, the Genesee Valley Regional Center developed a major national program in circulation management. In conjunction with the Gannett Foundation and the International Circulation Management Association, the center conducted a needs assessment for the program which confirmed the existence of a student body within the newspaper industry, identified the need for a college-level management program in circulation, confirmed widespread support among circulation executives and publishers, and set forth appropriate components of study. As a result, the college designed a curriculum and delivery system to reach a new national constituency (ORE, Final Report, Genesee Valley Regional Center, 1986).

Using a variety of flexible learning alternatives, including independent study, short term intensive residencies, and academic credit for learning from on-the-job experience, students can design an individualized "double focus" degree which emphasizes business, management, and economics with applied and theoretical study in circulation management. At the heart of this program is a Circulation Management Institute, a research and program center with exportable materials designed to offer study through Empire State College and a consortium of cooperating colleges and universities. The program enrolled its first students in May 1983 and subsequently admitted students twice a

year. Students have come from California, Georgia, Alaska, Michigan, New York and as far away as Ireland. Over fifty students have now enrolled in the program and its first graduates were honored at the International Circulation Management Association's meeting in June 1985. As the first college to serve students in circulation management, the project involves close cooperation with the newspaper industry. Its faculty and associate faculty include academics from several colleges and a wide range of industry executives and specialists drawn from key management and marketing areas.

SOME IMPLICATIONS FOR SERVING DIVERSE ADULT LEARNERS

Starting With Students: Easing the Transitions to College

Research literature on college attrition indicates that helping students make a successful transition from worker to student, from adult to learner, is a challenge that must be met by colleges desiring to serve such students (Lehmann, Conway, and Bishop, 1982). The idea of transition is central to a deeper understanding of how, when, and why adults learn. By transition we refer to two basic types. First, those transitions faced by the adult learner (life cycle and psychological) that must be worked through as the person moves from one role, phase, or place to another. As John Gardner aptly puts it: "No doubt the greatest opportunities for self-renewal and growth occur at those periods of life when one's role changes" (in Aslanian and Brickell, 1980, p. iii). Second, the idea of transition refers to those responses (educational and organizational) that a college must make if it is to attract, facilitate, support, and sustain the individual transitions.

Transitions Facing the Adult Learner

Looking at the idea of transition from a life cycle perspective, Aslanian and Brickell argue that "specific life events set the time on the learning clock; to know adults' life schedules is to know their learning schedules" (1980, p. 14). Adults in transition learn because they are changing roles at work, at home, or in their communities. Specific "marker events" signal, precipitate, or trigger these transitions and thus the learning. For example, getting hired or getting fired, getting promoted or getting transferred, getting married or getting divorced, getting sick, moving to a new city or moving into retirement are the kinds of events that tell adults it is time to learn. Aslanian and Brickell reported that 83% of adults gave life changes as the primary reason for learning and 56% of these adults cited transitions in their careers as the major impetus to their learning (1980, p. 54). These adults thus come to college with high expectations, enthusiastic about earning a degree, and seeking opportunities to improve themselves so that their professional and personal lives may be enriched. Understanding life cycle transitions, then, is a most important source of understanding when and why adults learn.

Changing roles from an adult and citizen in the community to one of student and learner in academia brings us to consider the psychological transition. Relatively successful adults who have spent ten or twenty years of their lives pursuing work, family, and community interests are suddenly stripped of the comforts and securities of a previous life style when they enroll in college. Although the life cycle transition may provide the motivation to enter college, adult learners usually encounter dispositional and situational barriers that impede their getting off to a good start. Adult learners frequently say to themselves and to advisors and to faculty: "I'm

afraid I am too old to earn a degree." "Given my position in life, why should I risk failure by being a student?" "Do I have enough time, energy, and stamina to pursue this program?" "I don't know what to learn or what it would lead to?" There is a pervasive sense of entering an unknown and unfamiliar area; thus some adults come to college with a high amount of anxiety and an underlying fear of failure surrounding the decision to enroll. Situational barriers that often add psychological pressures to the adult learner include such things as job responsibilities, family support and lack of a quiet place to study. There are, then, a host of pressures on the adult learner that colleges must understand if those adults are to bridge successfully the psychological and life-cycle transitions involved.

Dealing with Diversity: Transitions Facing the College, the Faculty, and the Program

Colleges planning on serving large numbers of adult learners effectively should have a compatible philosophy of learner-centered education, program features attractive to adults, and a faculty committed to facilitating the life cycle and psychological transitions discussed before. A learner-centered philosophy places the adult at the focal point of the learning environment in contrast to a faculty-centered philosophy that places teaching and advancing knowledge through disciplines, departments, professional associations, and highly specialized programs. Program features attractive to adults include an interdisciplinary curriculum, credit for prior college-level learning, flexible modes of study (classroom, independent study, internships, off-campus field study, etc.), and the pace of learning largely determined by the learner. In sum, the learner is largely responsible for his/her own learning (NIE, 1984). Some special programs (re-entry for adults, basic skills, continual orientation to college) may be needed to support particular

transition problems adults have. The faculty role must be broadened beyond the traditional classroom teaching and research model to include academic and other forms of advising, evaluating, facilitating, mentoring (one-to-one interaction with adults) and providing a wide range of learning resources to meet adult learner goals (Clark 1981). For colleges, this kind of educational transition requires a major rethinking about how educational programs are conceived and delivered.

Organizationally, colleges and universities must ask fundamental questions about how they deliver academic programs to adult learners. Does the college offer an introductory or re-entry program that specifically addresses the transitions adults must make? Does the college have policies and practices that support part-time study, flexible scheduling, independent study, meaningful financial aid support and other support services, such as day care facilities or evening hours of advising? Are faculty members ready to engage adult learners in terms of their goals, learning interests, styles of learning and their experiences that may require different teaching strategies? Does the college provide a way to evaluate and award credit for prior college level learning adults have acquired elsewhere? Organizationally, colleges must examine how they can bridge the gap between their traditional approaches to teaching and the new realities presented by adult learners. Resolving organizational transitions means that colleges must be prepared to examine and to change many of the policies, organizational arrangements, and practices that have served faculty interests and younger students well over the past 40 years.

Dealing with Diversity: The Significance of Empire State College

Empire State College has been a leading edge institution serving adult learners for the past 15 years and has gained a great deal of practical experience as well as theoretical insight into the ways to ease the transition process for adult learners and accommodate growing diversity among students. Empire State College has designed and developed an individualized program for adults so they can tailor-make their academic studies to fit their diverse backgrounds, learning styles, academic interests, and pace of learning. These individualized programs also incorporate the prior college-level learnings adults have accumulated over the years in a variety of settings and contexts. A contract learning mode of study with its flexibility in terms of what is to be studied, how, with what resources, and the methods and criteria of evaluation provides adult learners with additional flexibility to prepare and meet their future academic goals. These key features along with an interdisciplinary curriculum and a faculty (mentoring) relationship with adult learners that is direct, personal, and carefully focused provide the process and content conditions for serving the vast diversity of adults who have enrolled at the college since 1971.

Many students, however, are or could be overwhelmed by all this flexibility, freedom of choice and the need for self-directed learning. For those students who need a structured learning situation or who desire substantial support from a faculty member or tutor, Empire State has provided those more structured sources of support. Students at the Center for Labor Studies enroll in more "traditional type" courses. Other students can cross-register for courses taught on traditional campuses or enroll in the Center for Distance Learning's program which provides for courses taught in a distance mode. Still other centers and units offer special study groups,

workshops, seminars and short term residencies that provide more structure and support for group centered learning activities. Still other units of the college, such as Bedford-Stuyvesant or the Studio Arts Semester, are located in such a place as to reach out to students or provide the learning environment most suitable to the program's purpose.

All in all, Empire State College has attracted and seeks to serve one of the most diverse student populations of any college. Adults in the program face a full range of the transitional experiences that must be accommodated if the program is to serve those students well. Faculty at the college invest heavily in the advising, early degree planning, and instructing of students so that their initial experiences in the program insure a successful start. Administrators focus attention on the careful design and location of their programs, the effective delivery of program services, and the satisfaction levels reported by adult learners as they go through the program. After 15 years of operation and with more than 12,000 graduates, Empire State College has summoned the energy and vision to translate the diversity of adult learners into a unity of successful individual achievements. Empire State College, thus, stands as one important bridge across the many transitions noted in this report. Empire State College is a notable model for serving the growing number of adult learners in the future.

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APPENDIX A

The Student Biographical Inventory

The Student Biographical Inventory (SBI) is an instrument that was initially developed in 1974 and has been used with more than 5000 students since. It contains about 30 questions that are grouped into six major categories: the student's selection of ESC; previous education; external supports; personal goals; views of student's abilities and skills; and general demographic information. We have selected for this report all of those items that bear on the six major questions addressed in the text.

In the 16 tables comprising Appendix B of the report, the data are organized in such a way that a composite profile can be easily extracted as well as a comparison of more recently entering students can be made with the large group entering in the mid-1970's. The tables are organized to present the most recent student responses--from 1979 to 1984, followed by a total for the years 1979-84 which, in turn, is followed by totals for the period 1974-78. For the 17 characteristics compiled in this report, the reader can see trends in the data from the mid 70's to the early 80's and obtain an aggregate picture of adult learners in the Empire State program.

The Samples

The SBI was first administered in Fall of 1974 to all entering students and was subsequently administered to all newly enrolled students in 1975 and 1976. The SBI was not used in 1977. For the years 1974 to 1976 a total of 4543 SBIs were returned, representing a 60 percent response rate. This sample was checked against selected student characteristics in the Student Master File and found to be representative of all students enrolled in the College at that time.

In 1978, the SBI was again administered to all newly enrolled students at four participating units in a FIPSE supported New Learner's Project. The four units were Alfred, Fredonia, New Paltz, and Watertown. A total of 101 questionnaires were sent out from June to December 1978 and 97 SBIs were returned, yielding a response rate of 96%. The high rate of response was in large part attributed to the mentor-coordinators distributing the SBIs at orientation and asking for student support. Unlike the 1974-1975-1976 samples, the 1978 sample was not College-wide nor was it representative of all students enrolled at the time.

In 1979, the SBI, administered to newly enrolled students in May, June, and July of 1979, was a shortened, revised version of the original SBI prepared for the ESC Self Study. A total of 385 SBIs were sent out and 245 were returned yielding a response rate of 64%. This was a College-wide sample.

The most recent samples have been administered as part of the ongoing evaluative effort that the research office is conducting for each of the nine centers that make up the College. In 1981 and 1982, SBIs were administered as part of the Genesee Valley Regional Center program evaluation. In fall 1981 (September, October, November) and in fall 1982 (September, October, November)

SBIs were sent to all newly enrolled students. A total of 205 were sent out and 120 were returned, yielding a response rate of 58%. All units of the center and the downtown Rochester location were included.

In 1983 and 1984, SBIs were administered as part of the Metropolitan Regional Center's program evaluation. Starting in the fall of 1983 and continuing throughout the year up to and including September of 1984, 295 SBIs were sent to entering students at each of the units as well as the main Manhattan Center of Metropolitan Regional Center. Of the 295 SBIs sent, 154 were returned, yielding a response rate of 52%.

In 1985, a special SBI was devised for the Adult Learning Project. This project is part of a national study on value-added education being conducted by the Higher Education Research Institute at UCLA. Two ESC centers have cooperated in this project (Long Island Regional Center and the Center for Labor Studies in NYC). Eighty-one SBIs were sent to newly enrolled students at these centers and 56 were returned, yielding a response rate of 69%.

Criteria for Determining Amount and Extent of Change

Two criteria were used to determine the amount and extent of change in student background characteristics: the magnitude of the change from 1974 to 1985 and its direction. A ten percent difference in any characteristic was considered the minimal amount of change necessary for reporting. An eleven to fifteen percent difference represents a moderate change and anything over sixteen percent was defined as a substantial change.

APPENDIX B

Selected Background Characteristics

of

Entering Students

Empire State College

1974 -1985

Table 1

Age of Entering ESC Students, 1974-85
(in percent)

Age Category	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1985 (N=56)	1979-85 (N=575) Totals	1974-78 (N=434) Totals
Less than 23	3	3	8	2	4	8
23 - 27	18	19	22	5	18	17
28 - 32	26	19	19	13	21	17
33 - 37	14	23	21	20	18	14
38 - 42	13	16	9	21	14	13
43 - 47	9	12	12	11	10	13
48 - 52	11	4	4	16	8	10
53 - 57	3	3	3	5	3	6
58 - over	3	--	2	5	2	3
Average Age	36	34	35	41	36	37

Source: Office of Research and Evaluation, Student Biographical Inventory. Question Asked: What is the year of your birth? Age was calculated according to year of initial enrollment.

Table 2

Sex and Marital Status of ESC Students, 1974-84
(in percent)

Sex, Marital Status	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1974-78 (N=4543) Totals
% Female	54	56	55	55	54
% Married	61	60	36	53	67

Table 3

ESC Students' Reported Racial Identification
(in percent)

Racial Category	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1974-78 (N=4543) Totals
White/Caucasian	85	87	68	80	88
Black/Afro American	10	9	20	13	9
Hispanic/Puerto Rican	2	--	10	4	2
Asian	--	--	2	1	--
Other	3	4	--	2	1

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984.

Table 4

Occupations of Entering Students, 1974-85
(in percent)

Occupation	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1985 (N=56)	1979-85 (N=575) Totals	1974-79 (N=[illegible]) Totals
Professional	7	6	3	9	6	13
Semi-professional	12	9	19	7	13	22
Executive/Managerial	--	--	1	--	--	--
Supervisor/Public Official	13	12	5	9	10	19
Technical	11	14	8	9	11	8
Small Business	3	1	2	4	3	2
Sales	4	2	5	--	4	2
Clerical	27	18	23	27	24	10
Skilled Trades	1	5	1	20	4	2
Semi-Skilled Trades	5	4	3	4	4	5
Unskilled	6	8	2	4	5	3
Homemaker	10	9	3	5	7	9
Student	--	7	20	--	7	5
Other (unemployed, retired, etc.)	--	5	5	2	2	--
Totals	99	100	100	100	100	99

Source: Office of Research and Evaluation, Student Biographical Inventory. Question Asked: What is your current occupation? Please be as specific as possible (e.g. shop foreman, Ford plant).

Table 5

Students' Reported Number of Hours Worked per Week
(in percent)

Hours worked per week	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1974-78 (N=4543) Totals
Over 40 hours	20	26	13	20	24
31 - 40 hours	49	45	40	45	45
21 - 30 hours	8	5	12	8	7
Less than 20 hours	8	5	13	9	10
Does not apply (housewife, retired, etc.)	15	19	22	19	14
Totals	100	100	100	101	100

Source: Office of Research and Evaluation, Student Biographical Inventory. Question Asked: If employed now, how many hours per week do you work for pay?

Table 6

Students' Perceptions of Academic and Personal Goals to be Achieved (percent saying very important)

Academic Goals	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	Totals 1979-84 (N=519)	Totals 1974-78 (N=4543)
To meet the requirements to enter a profession or graduate school	48	60	64	57	56
To increase my knowledge and understanding of an academic field	NA	85	68	77	NA
To increase my desire and ability to undertake self-directed learning	NA	60	57	53	53
Simply, to learn	NA	75	65	70	68
Career Preparation/Improvement Goals					
To discover my vocational interests	NA	37	25	31	30
To develop a new career	49	61	43	51	46
To attain specific skills that will be useful on a job	43	75	60	59	62
To improve my chances of making more money (or promotion, etc.)	50	64	57	57	43
A degree is required for my present or future job	54	58	52	55	54
To improve my professional status	NA	64	70	67	64
Personal Development Goals					
To increase my self-confidence	NA	58	53	55	NA
To improve my self-image	NA	49	47	48	41
To improve my leadership skills	NA	56	42	49	NA
To improve my ability to get along with others	NA	26	28	27	NA
Social/Cultural Participation Goals					
To learn how to participate effectively as a citizen in my community	16	23	28	22	18
To increase my appreciation of art, music, literature and other cultural expressions	27	18	36	27	28
To become involved in social and political activities	NA	17	26	22	20
To increase my awareness of different philosophies, cultures, and ways of life	NA	35	47	41	35
To develop an understanding and an appreciation of science and technology	20	32	34	29	17

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question asked: For each goal statement, please check the appropriate degree of importance to you.

NA = Particular goal statement was not asked on the inventory for that year.

Table 7

Students' Preferred Area of Study
(in percent)

Area of Study	1979 (N=234)	1981-82 (N=114)	1983-84 (N=133)	1979-84 (N=481) Totals	1974-78 (N=4160) Totals
The Arts	12	6	18	12	10
Business, Management, & Economics	35	36	21	31	19
Community/Human Services	17	24	10	17	17
Cultural Studies	2	5	9	5	5
Educational Studies	5	4	4	4	6
Historical Studies	2	1	2	2	1
Human Development	5	7	8	6	10
Science, Math, & Technology	12	13	11	12	8
Social Theory, Structure, & Change	2	4	8	4	9
Interdisciplinary	8	--	8	6	14
Totals	100	100	99	99	

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question asked: What will be your primary area of study?

Table 8

Highest Level of Formal Education Reported by Student
(in percent)

Highest Level of Formal Education	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1975 only* (N=463) Totals
Grammar School or Less	1	--	--	1	-
Some High School	1	2	6	3	1
High School Diploma	13	15	13	14	8
Some college (less than AA or equivalent)	39	40	41	40	52
Associate Degree	36	33	26	31	30
College Degree	2	2	3	2	1
Some graduate/professional	7	7	8	7	6
Graduate/Professional degree	1	1	3	2	2
Totals	100	100	100	100	100

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question asked: What is the highest level of formal education obtained by you? This question was not asked in the 1974-76 SBI's but was asked in a special 1975 survey, reported in a document entitled "Educational Outcomes from Contract Learning," 1975.

Table 9

Students' Perception of Highest Degree Sought
(in percent)

Highest Degree Sought	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1974-78 (N=4543) Totals
Associate Degree	2	9	1	4	3
Bachelor's Degree	42	45	29	39	36
Master's Degree	44	33	41	40	48
Doctoral/Professional degree	12	12	28	17	13
Totals	100	99	99	100	100

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question asked: What is the highest academic degree that you intend to obtain?

Table 10

Applications to other Colleges
(in percent)

Applications	1979 *	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=274) Totals	1974-78 (N=4543) Totals
Only to ESC	--	84	82	83	82
To one other college	--	14	12	13	13
To two other colleges	--	12	5	4	4
To three other colleges	--	--	1	1	1
Totals	--	100	100	100	100

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question asked: List below the college's other ESC you applied to.

*The question was not asked on the 1979 inventory.

Table 11

Very Important Reasons for Enrolling at ESC
(in percent)

Reasons for Enrolling	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1974-78 (N=4543) Totals
Independence/Flexibility (study at own pace and schedule)	79	83	82	81	83
Work as well as study at ESC	*	74	75	75	71
Obtain credit for prior learning	62	58	64	61	63
Special programs offered by ESC	*	52	64	58	66
Obtain a degree quickly	62	48	57	56	56
Live at home while attend ESC	*	38	31	34	43
Academic reputation of ESC	35	45	36	39	37
ESC's modest tuition	*	47	58	53	31
Student recommended ESC	*	21	23	22	16
Opportunity to study 1-1 with faculty	*	*	57	57	57
Spouse wanted student to enroll	*	7	6	7	11

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Percentages were calculated on number of responses at top of each column.

*These items were not included in the 1979 questionnaire.

Table 12

Reported Source of Information about the College
(in percent)

Source of Information	1979 *	1981-82 (N=120)	1983-84 (N=154)	1981-84 (N=274) Totals	1974-76 (N=4543) Totals
Friend or family member		25	31	28	28
ESC graduate or student		45	38	42	39
Ads/media		33	18	26	24
Staff from other colleges		17	17	17	18
Employer		8	4	6	16
ESC Bulletin		11	9	10	13
ESC staff		9	8	9	10
High school/college counselor		3	5	4	5
Other sources		13	6	10	2

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question asked: How did you find out about ESC? (Check as many as applicable.) Percentages were calculated on total number of responses since an individual checked more than one source.

*This question was not asked in 1979.

Table 13

Major Source of Financial Support for Entering Students
(in percent)

Major Sources of Support	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1974-78 (N=4543) Totals
Earnings from Work	58	60	59	59	63
Employer Support	20	36	15	24	19
Loans	17	34	3	18	19
Grants	39	42	38	40	23
Savings	16	13	16	15	18
Spouse's Earnings	16	17	14	16	24

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question asked: For each source of support listed, check the appropriate column on the right.

Table 14

Students' Ability to Finance Their College Education
(in percent)

Ability to Finance College Education	1979 *	1981-82 (N=120)	1983-84 (N=154)	1985 (N=56)	1979-85 (N=330) Totals	1974-[illegible] (N=4543) Totals
Student has sufficient funds without financial aid	--	35	28	38	32	32
Student probably has enough funds without financial aid	--	13	15	18	15	19
Student probably has enough funds but may need some financial aid	--	20	20	27	21	23
Student can complete college only with financial aid	--	29	34	16	29	24
Student unsure if college can be completed even with much financial aid	--	3	3	--	3	2
Totals	--	100	100	100	100	100

Source: Office of Research and Evaluation, Student Biographical Inventory. Question Asked: Check the statement that best describes your ability to finance your college education.

*This question was not asked in the 1979 inventory.

Table 15

Students' Annual Income at Entry
(in percent)

Income Category	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1974-78 (N=4543) Totals
Over $30,000	15	27	13	18	6
$20 - 30,000	22	21	18	20	16
$15 - 20,000	16	10	17	15	16
$10 - 15,000	14	22	12	15	24
$7 - 10,000	7	5	7	7	14
Less Than $7,000	25	14	33	25	25
Total	100	100	100	100	100
Average Income*	$17,466	$18,900	$16,200	$17,522	$13,914

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question Asked: What was your total income last year? Consider annual income from all sources (earnings from work, from spouse, parents, investments, etc.) before taxes.

*The yearly average incomes have not been standardized to control for inflation.

Table 16

Students' Self-Assessment of Academic Abilities and Success Orientation Traits

(Above Average Ratings, in percent)

Traits	1979 (N=245)	1981-82 (N=120)	1983-84 (N=154)	1979-84 (N=519) Totals	1974-78 (N=4543) Totals
Independence	78	82	83	83	79
Drive to Achieve	NA	67	64	66	72
Persistence	NA	74	71	73	68
Ability to handle stress	67	56	63	60	69
Leadership Ability	62	62	64	63	65
Self-Confidence (Social)	NA	44	54	49	NA
Self-Confidence (Intellectual)	NA	50	67	55	58
Academic Ability	60	59	63	61	55
Reading Ability	51	48	67	55	53
Writing Ability	44	36	64	48	43
Public Speaking Ability	46	31	44	40	35
Mathematical Ability	24	27	28	26	24

Source: Office of Research and Evaluation, Student Biographical Inventory, 1974-1984. Question Asked: Rate yourself on each of the following traits when compared with the average person of your own age.

NA = Data on this item is not available.

*The yearly average incomes have not been standardized to control for inflation.